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SUBJECT OF INVESTIGATION

EXPLORATION OF NEW CHEMOTHERAPEUTICS
FOR INFECTIOUS DISEASES.

AD 1101
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U.S. Army Research & Development Group (9984) (Far East)

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ABSTRACT

1) Protomycin, a new antiamaebic substance was produced by a new strain Streptomyces reticuli var. protomyciclus, was determined chemical properties and structure. Next subjects are planted the mass production of Protomycin, subsequently treated amebic patients with it.

2) As a new other antibacterial and antifungal substance was fund in this Streptomyces cultural media the substance was tried to purify and crystallize at the present time. Finally a antibacterial substance was crystallized as a colorless needle crystalline substance. The chemical properties of this crystalline substance were as follows:

Melting point: 212-213°C

λ_{Max} MeOH 232 $\text{m}\mu$ ($E^{1\%} = 300$)

Elemental analysis: C 68.78, 68.95%,
H 7.85, 7.74%,
N 0%.

Molecular weight: 542.65

Antimicrobial activity of this crystalline substance: The minimal inhibitory concentration of the substance was 1 mcg/ml - 1,000mcg/ml to gram positive bacteria, but this did not show inhibitory effects to gram negative bacteria.

The substance showed inhibitory effects to some pathogenic microbes or plants as follows:

Organisms	Minimal inhibitory Concentration(mcg/ml)
Xanthomonas oryzae	15
Cladosporium wernicke	4
Botrytis	4
Collettrium	4
Piricularia oryzae	250

3) The purification methods of Cephalomycin, a high molecular anti-Japanese Encephalitis virus substance have been searched.